

Role Strain in Collegiate Athletic Training Approved Clinical Instructors

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Context: Certified athletic trainers who serve as Approved Clinical Instructors (ACIs) in the collegiate setting are balancing various roles (eg, patient care and related administrative tasks, clinical education). Whether this balancing act is associated with role strain in athletic trainers has not been examined.

Objective: To examine the degree of, and contributing factors (eg, socialization experiences, professional and employment demographics, job congruency) to, role strain in collegiate ACIs.

Design: Cross-sectional survey design.

Setting: Geographically stratified random sample of ACIs affiliated with accredited athletic training education programs at National Collegiate Athletic Association (NCAA) Division I, II, and III institutions.

Patients or Other Participants: 118 collegiate ACIs (47 head athletic trainers, 45 assistant athletic trainers, 26 graduate assistant athletic trainers).

Main Outcome Measure(s): The Athletic Training ACI Role Strain Inventory, which measures total degree of role strain, 7 subscales of role strain, socialization experiences, professional

and employment characteristics, and congruency in job responsibilities.

Results: A total of 49% ($n = 58$) of the participants experienced a moderate to high degree of role strain. Role Overload was the highest contributing subscale to total role strain. No differences were noted between total role strain and role occupant groups, NCAA division, or sex. Graduate assistant athletic trainers experienced a greater degree of role incompetence than head athletic trainers did ($P = .001$). Division II ACIs reported a greater degree of inter-role conflict than those in Division I ($P = .02$). Female ACIs reported a greater degree of role incompetence than male ACIs ($P = .01$). Those ACIs who stated that the ACI training provided by their institution did not adequately prepare them for the role as an ACI experienced greater role strain ($P < .001$).

Conclusions: The ACIs in the collegiate setting are experiencing role strain in balancing their roles as health care providers, clinical educators, and administrators. Methods to reduce role strain need to be considered.

Key Words: socialization, role incompetence, role overload, role conflict

Key Points

- Some degree of role strain in collegiate athletic trainers who serve as Approved Clinical Instructors appears to be inevitable.
- Programs should explore strategies for reducing role strain in Approved Clinical Instructors, including ensuring adequate orientation to the role through initial and continuing Approved Clinical Instructor training.
- Graduate assistants may need additional guidance in gaining competence in the role of an Approved Clinical Instructor.

The Approved Clinical Instructor (ACI) plays a vital role on the athletic training clinical education team.¹ Accreditation standards established by the Commission on Accreditation of Athletic Training Education define the roles of an ACI as providing direct clinical supervision as well as instruction to, and evaluation of, athletic training students.² In our previous research^{1,3} on the roles of ACIs, we established and validated research-based standards and criteria for the selection, training, and evaluation of ACIs, which are reflected in the content areas for ACI training. Although the roles of the ACI are becoming well established, our previous research suggests that ACIs may be experiencing role strain as they attempt to balance roles in clinical education with roles in patient care.³

Goode's⁴ long-standing role theory provides a conceptual framework for understanding the role strain experienced by ACIs. His⁴ theory suggests that in general, people want to fulfill all of the expectations placed upon them. However, there will certainly be some cases in which they are unable to do so. To further appreciate this theory and

its relevance to role strain experienced by ACIs, it is necessary to define key operational terms.

First, a *role occupant* is an individual taking on a particular role. For example, a certified athletic trainer (AT) may occupy the role of an ACI, health care provider, or administrator. Often, however, the AT is simultaneously occupying these roles. A *role set* comprises a group of relationships associated with occupying a particular role. For example, the ACI role set may include relationships with athletic training students, the program director, and the clinical education coordinator. For a health care provider, the role set may include relationships with patients, physicians, and coaches. For an administrator, the role set may include relationships with athletic directors and insurance coordinators. *Role obligations* are those expectations associated with occupying a particular role and are defined by the members of the role set. The AT, then, has expectations from the individuals in each of the role sets mentioned above. For example, program directors expect athletic trainers as ACIs to complete required student evaluations in a timely manner. Patients expect the

Table 1. Description of 7 Role Strain Subscales

Role Strain Subscale (Items)	Definition and Example
Role Conflict: (3 subscales)	The existence of clear but competing or incompatible expectations
Inter-Sender Conflict (5 items)	The demands of one member of a person's role set conflict or are incompatible with demands of another person or persons in the role set. <i>Example: Feeling unable to satisfy the conflicting demands of the athletic director and the athletic training education program director.</i>
Intra-Sender Conflict (8 items)	The demands from a single member of the role set are incompatible or mutually exclusive. <i>Example: Having inadequate time to meet role expectations.</i>
Inter-Role Conflict (3 items)	When a person has membership in 2 different groups and the demands of one role conflict with the demands of another role. <i>Example: Feeling that my teaching responsibilities take time needed from my athletic training clinical responsibilities.</i>
Role Ambiguity (8 items)	The degree to which clear information is lacking with respect to the expectations associated with a role, methods for fulfilling known role expectations, and/or the consequences of role performance. <i>Example: Having a lack of clearly defined expectations of my role as an Approved Clinical Instructor.</i>
Role Overload (7 items)	The role expectations are too complex or make too many demands for the time and energy available or there is conflict between quality and quantity given the time constraint. <i>Example: Feeling like I have too heavy a workload, one that cannot possibly be finished during the normal work week.</i>
Role Incongruity (6 items)	The expectations for role performance run counter to the individual's self-perception, disposition, attitudes, and values. <i>Example: Feeling that the goals and objectives established by the athletic training education program for athletic training students are incongruent with my own goals and objectives for these students.</i>
Role Incompetence (5 items)	The role occupant lacks the requisite skills, knowledge, or ability to enact the role assumed. <i>Example: Feeling I do not have sufficient knowledge and skills to fulfill my role as an Approved Clinical Instructor.</i>

AT, as a health care provider, to render high-quality care that will enable them to return to competition as quickly as possible. Athletic directors expect the AT as administrator to monitor the supply budget and to keep costs low. *Role strain*, then, is manifested when an individual has difficulty meeting the various obligations associated with the multiple roles.⁴

Also related to role strain is *role stress*, a condition in which role obligations are “vague, irritating, difficult, conflicting, or impossible to meet.”⁵ Work by Mobily⁶ suggests that role strain has several contributing factors: role conflict, role overload, role ambiguity, role incompetence, and role incongruity. (Descriptions of these factors⁶ are presented in Table 1.) Therefore, according to the Goode⁴ role theory, an AT who simultaneously occupies the roles of ACI, health care provider, and administrator may not be able to fulfill all of the role expectations (eg, expectations from the program director, athletic director). Conflicts associated with time commitments and priorities may arise and may result in role strain.

Athletic trainers who serve as ACIs are not alone in experiencing role strain. In more than a decade of research, investigators have examined issues regarding role strain in nursing clinical faculty^{6–14} and in medical preceptors.¹⁵ Clinical nursing faculty have reported feelings of emotional and physical exhaustion¹¹ and uncertainty about their role in clinical teaching.¹⁰ In addition, medical preceptors have reported difficulty balancing high-volume patient care with clinical teaching.¹⁵ It is plausible that athletic training ACIs are experiencing similar role strain when balancing the supervision and clinical instruction of athletic training students with quality patient care and associated administrative tasks.

The nursing literature also suggests a relationship between anticipatory and organizational socialization experiences and the degree of role strain.^{6,13} These socialization experiences provide an individual with the norms, values, knowledge, and skills necessary for performing a particular role.¹⁶ Anticipatory socialization

consists of those experiences before a role is formally occupied (ie, professional preparation coursework). Organizational socialization consists of those experiences associated with a specific job or employment (eg, workplace orientation). In the context of athletic training, ACI training might be considered both anticipatory and organizational socialization. It technically occurs before the role is occupied (anticipatory) but is also specific to each institution (organizational). Whether anticipatory or organizational socialization experiences ultimately prepare ATs for their roles as ACIs and whether those experiences affect their perception of role strain is unknown.

A link also has been proposed between role strain and job congruency in nursing faculty.⁶ Job congruency is the degree to which an individual's professional interests align with those defined by the employer.⁶ For example, an AT may lack job congruency if he or she has an interest in serving as an ACI but the employer does not value this type of activity. This lack of fit in job interests may contribute to role strain in the AT.

The purpose of our study was to examine the degree of role strain experienced by collegiate ATs who serve as ACIs. The following research questions guided this study:

1. What is the degree of role strain in collegiate ATs who serve as ACIs?
2. What factors contribute to the degree of role strain in collegiate ATs who serve as ACIs?
3. Do socialization experiences affect the degree of role strain in collegiate ATs who serve as ACIs?
4. Do collegiate ATs' professional and employment demographics (eg, years of experience supervising athletic training students, number of hours worked per week) affect the degree of role strain for those who serve as ACIs?
5. Does job congruency affect the degree of role strain in collegiate ATs who serve as ACIs?

METHODS

Participants

A geographic stratified random sample of institutions with Commission on Accreditation of Athletic Training Education-accredited entry-level athletic training education programs (ATEPs) were invited to participate in this study. (Accredited ATEPs at National Association of Intercollegiate Athletics schools were not included due to the small sample they represented.) All accredited ATEPs were grouped by National Athletic Trainers' Association (NATA) district and then categorized by their institution's National Collegiate Athletic Association (NCAA) division classification. An equal number of institutions from each NCAA division was selected randomly within each district. The NCAA division was used as a selection factor to account for ACIs working at institutions with various levels of staffing or resources. The number of institutions per district was based on the proportion of all accredited ATEPs in each district. For example, in 2005, District 4 contained approximately 24% ($n = 71$) of all ATEPs. Therefore, 24 institutions were selected randomly from District 4. From this sample, a stratified sample of 8 ATEPs was then randomly selected from each NCAA division. Three ACIs (head athletic trainer [HAT], assistant athletic trainer [AAT], and graduate assistant athletic trainer [GAAT]) from each selected institution were invited to participate.

Instrumentation

The Athletic Training ACI Role Strain Inventory was adapted (with permission) from the Mobily Nurse Faculty Role Strain Inventory.⁶ The original instrument⁶ contained 44 items to measure the degree of role strain and 7 subscales to measure its contributing factors (Table 1). In addition, Mobily's⁶ instrument measured the effect of professional and employment demographics and job congruency on role strain; it was based on traditional faculty roles (ie, teaching, research, service). We adapted the items to fit the patient care (ie, injury prevention, evaluation, treatment, rehabilitation), athletic training clinical education (ie, instruction, student evaluation, student supervision, documentation of clinical proficiencies), and administration (ie, paperwork associated with patient care) responsibilities of collegiate ATs. Two versions of the Athletic Training ACI Role Strain Inventory were developed, with 1 version for HATs and AATs and the other for GAATs. Both versions of the instrument had 3 sections: role strain inventory, socialization experiences and professional and employment demographics, and job responsibilities. The instruments were pilot tested with a convenience sample of 15 collegiate ATs (2 HATs, 4 AATs, and 9 GAATs) who currently served as ACIs (years of experience ranged from less than 1 to more than 10 years). They reviewed the instruments for overall clarity, purpose, and relevance, and revisions were made accordingly.

Section 1 of both versions of the instrument examined role strain and contained 42 items that measured how often different aspects of the roles as a collegiate AT/ACI were perceived to contribute to role strain. Participants used a 5-point Likert scale to rate these items (1 = *never*, 2 = *rarely*,

3 = *sometimes*, 4 = *frequently*, 5 = *nearly all the time*). Participants were asked to add items they felt contributed to their role strain. Alpha reliability coefficients were obtained using the 42 items constituting the total role strain inventory and for each of the 7 subscales. The α coefficient for the total inventory was .89. The α coefficients for the 7 subscales were as follows: Role Incompetence = .86, Role Overload = .85, Intra-Sender conflict = .80, Inter-Sender Conflict = .79, Role Ambiguity = .79, Role Incongruity = .75, Inter-Role Conflict = .67.

Section 2 of the instruments contained 7 items to examine socialization into the role of ACI. Anticipatory socialization was determined by the participants' highest degree earned and whether they perceived that the degree prepared them for the role as ACI (4 questions total), whether they had a teaching certificate, and whether they had a formal background in teaching and learning (eg, academic coursework regarding learning theories). For the purpose of this study, we considered the ACI training required at each institution to be a form of organizational socialization (because it is unique to each ATEP). One item was developed to determine participants' perceptions regarding the adequacy of this ACI training. Section 2 of the instruments also contained 6 items regarding professional and employment demographics: sex, NATA district, number of hours worked per week, number of athletic training students supervised per semester, number of years experience supervising athletic training students, and number of student-athletes for whom they are responsible each semester. The GAAT version also contained additional items to determine the average number of academic credit hours taken per semester and the number of semesters (rather than years) of experience supervising ATs. At the time of this study, accreditation standards and guidelines permitted GAATs with less than 1 year of certification from the Board of Certification to serve as ACIs.

Section 3 of the instruments examined job responsibilities. On the HAT and AAT version of the instrument, participants were asked to indicate the job category that best described their current appointment (eg, full appointment in athletics department, dual appointment in athletics department and academic unit). Both versions of the instrument contained 3 items to measure congruency in job responsibilities. The purpose of these items was to compare participants' perceptions regarding their ideal job responsibilities with their actual and expected job responsibilities. Participants were asked to consider 3 areas of responsibility: patient care (included injury prevention, evaluation, treatment, rehabilitation), clinical education (included student instruction, evaluation, supervision, and documentation of clinical proficiencies), and administration (included completing any documentation associated with patient care and insurance). Participants were asked to indicate which combination of responsibilities represented how they would ideally like to spend their time at work, how they actually spend their time at work, and what expectations are encouraged or promoted by their immediate supervisors. Options for each question included primarily patient care; clinical education; administration; patient care and clinical education; patient care and administration; clinical education and administration; and patient care, clinical education, and administration.

Procedures

This study was approved by the Institutional Review Board at The University of North Carolina at Greensboro. The program director of each randomly selected institution was contacted via e-mail about participating in the study. Program directors were mailed a survey packet and were instructed to distribute the appropriate version of the Athletic Training ACI Role Strain Inventory to the HAT and AAT (1 each) and GAAT (1 only). Each participant returned the completed instrument directly to the principal investigator in a prepaid, self-addressed envelope. In an attempt to capture ACIs with various in-season sports and AATs and GAATs with various years of experience, we conducted 2 rounds of data collection. The first round was during the spring 2005 semester with 49 (51%) of the randomly selected institutions (37 ACIs responded). The second round was during the fall 2005 semester with 47 (49%) of the randomly selected institutions (81 ACIs responded). During the spring-semester round, program directors were instructed to administer the instrument to the AAT and GAAT with the most experience as ACIs. During the fall-semester round, program directors were instructed to administer the instrument to the AAT and GAAT with the least experience as ACIs.

DATA ANALYSIS

Using Mobily's⁶ study as a guide, role strain was defined statistically as the total mean score on the 42-item role strain scale. Therefore, we categorized the degree of role strain based on the overall mean score and its SD. The combined mean score for all participants was 2.68, with an SD of 0.616. Using 1 SD above and below the mean and rounding to the nearest tenth, the following designations were used to categorize the degree of role strain: high = 3.4 or above, moderate = 2.7 to 3.39, low = 2.1 to 2.69, minimal = 2.09 or below.

Descriptive statistics (including measures of central tendency) were calculated for individual items on the role strain inventory, professional and employment demographics, socialization experiences, and job congruency. We used separate 1-way analyses of variance to compare the dependent variables of total role strain score and the 7 individual subscale scores with role occupant, sex, and NCAA division. We used 2-tailed, independent *t* tests to examine differences between organizational and anticipatory socialization items and total role strain. Separate 1-way analyses of variance were used to examine differences between total role strain and items regarding congruency in job responsibilities. We performed Tukey post hoc testing when applicable. Alpha levels were set at the .05 level. The minimum target sample size of each group of respondents was 30, which yields a power of .92 for detecting a large effect. Sample sizes of 25 and 20 yielded powers of .86 and .76, respectively.¹⁷ Analyses were conducted using SPSS (version 14.0; SPSS Inc, Chicago, IL).

RESULTS

Demographics

A total of 58 (60%) of the 96 randomly selected institutions participated in this study. We had an ACI

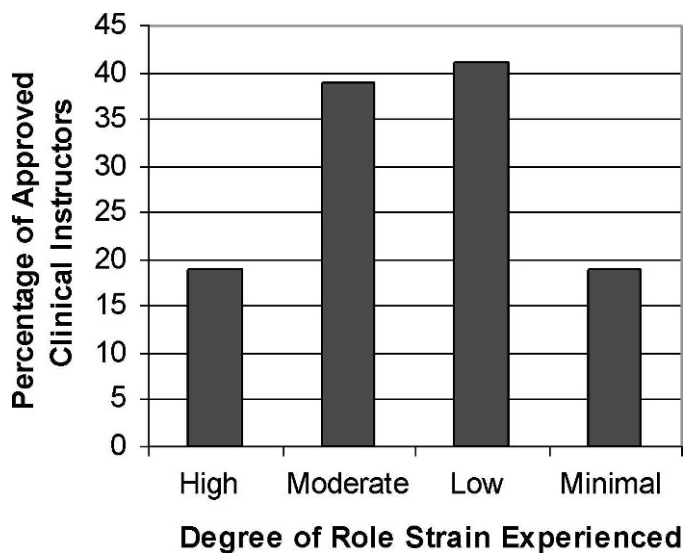


Figure 1. Total degree of role strain.

response rate of 68% ($n = 118$) from the participating institutions (potential of 174 ACIs with 3 ACIs from each institution). Participants represented all NCAA divisions, both sexes, and 9 of the 10 NATA districts. A total of 36% ($n = 42$) of the HATs and AATs had full-time appointments with athletics while serving as ACIs; 38% ($n = 45$) had dual appointments in the athletics department and in an academic unit with ACI and classroom teaching responsibilities. The Division III setting (77%, $n = 23$) saw the highest percentage of these dual appointments, followed by the Division II setting (44%, $n = 14$) and the Division I setting (26%, $n = 8$). Only 31% ($n = 37$) of the participants reported working more than 40 hours per week. Seventy-eight percent ($n = 92$) of the participants supervised 3 or more athletic training students each semester, and 85% ($n = 100$) were directly responsible for more than 30 student-athletes each semester. A total of 46% ($n = 12$) of the GAATs were in their first 2 semesters serving as ACIs, and 88% ($n = 21$) were enrolled in an average of 9 or more credit hours per semester. A complete description of participant demographics is presented in Table 2. We found no differences between total role strain and any of the demographic items.

Total Role Strain and Subscale Scores

Some degree of role strain appears to be inevitable in collegiate ATs who serve as ACIs. Figure 1 demonstrates a breakdown for levels of role strain within a normal, bell-shaped curve distribution. Forty-nine percent ($n = 58$) of the participants experienced a moderate to high degree of role strain, whereas 51% ($n = 60$) experienced a minimal to low degree of role strain. No differences were noted between total role strain and role occupant groups, NCAA division, or sex. Twenty-two items had a mean greater than 2.7, indicating that they contributed to a moderate-to-high degree of role strain (Table 3). The Role Overload subscale had the highest mean score (3.16), indicating that it contributed to a moderate amount of role strain (Table 4).

We found a difference between the subscale score for Role Incompetence and role occupant groups. The GAATs (mean = 2.32 ± 0.76) experienced a greater degree of role

Table 2. Participant Demographics

	n (%)
Role of respondent	
Head athletic trainer	47 (39.8)
Assistant athletic trainer	45 (38.1)
Graduate assistant athletic trainer	26 (22.0)
National Collegiate Athletic Association division	
Division I	44 (37.3)
Division II	42 (35.6)
Division III	32 (27.1)
Sex	
Male	64 (54.2)
Female	54 (45.8)
National Athletic Trainers' Association district	
District 1	4 (3.4)
District 2	10 (8.5)
District 3	28 (23.7)
District 4	33 (28.0)
District 5	20 (16.9)
District 6	0
District 7	2 (1.7)
District 8	6 (5.1)
District 9	10 (8.5)
District 10	5 (4.2)
Primary job appointment	
Full-time appointment in athletics with Approved Clinical Instructor duties	42 (36.0)
Dual appointment in athletics and academic unit	45 (38.1)
Graduate assistant in athletics	26 (22.0)
Other	5 (4.2)
Number of hours worked per week ^a	
<20	12 (10.2)
20 to 25	10 (8.5)
26 to 30	16 (13.6)
31 to 40	42 (35.9)
41 to 50	31 (26.5)
>50	6 (5.1)
Directly responsible for average of ____ athletes each semester	
11 to 20	10 (8.5)
21 to 30	8 (6.8)
31 to 40	16 (13.6)
41 to 50	14 (11.9)
>50	70 (59.3)
Number of athletic training students supervised each semester ^a	
1	7 (5.9)
2	18 (15.3)
3	40 (34.1)
4 or more	52 (44.4)
Years of experience supervising athletic training students	
<1	22 (18.6)
1 to 2	12 (10.2)
2 to 3	16 (13.6)
4 to 5	15 (12.7)
5 to 10	20 (16.9)
>10	33 (28.0)
Teaching certificate	
Yes	27 (22.9)
No	91 (77.1)
Formal background in teaching and learning	
Yes	50 (42.4)
No	68 (57.6)
Highest degree earned ^a	
Bachelor's	24 (20.5)
Master's in other field	55 (47.0)
Master's in athletic training	33 (28.2)
Doctorate in other field	5 (4.2)
Doctorate in athletic training	0

^a One participant did not answer the question.

incompetence than HATs (mean = 1.75 ± 0.64) ($F_{2,115} = 5.421$, $P = .001$) but no difference compared with AATs (mean = 2.08 ± 0.80). We found no differences between role occupant groups in the following 6 subscales: Inter-Role Conflict, Intra-Sender Role Conflict, Role Incongruity, Role Ambiguity, Inter-Sender Role Conflict, or Role Overload.

A difference was demonstrated between the Inter-Role Conflict subscale score and NCAA division. Division II (mean = 3.15 ± 0.82) ATs who serve as ACIs reported a greater degree of inter-role conflict than did Division I ACIs (mean = 2.69 ± 0.82) ($F_{2,115} = 4.202$, $P = .02$) and reported no difference compared with Division III ACIs (mean = 3.06 ± 0.65). No differences among NCAA divisions were found for Intra-Sender Role Conflict, Inter-Sender Role Conflict, Role Incompetence, or Role Overload.

We noted a difference between the Role Incompetence subscale score and sex, with women (mean = 2.19 ± 0.83) reporting a higher degree of role incompetence than men (mean = 1.85 ± 0.66) ($F_{1,116} = 6.255$, $P = .01$). We found no difference among male and female collegiate ATs who serve as ACIs in the following subscales: Inter-Role Conflict, Intra-Sender Role Conflict, Role Incongruity, Role Ambiguity, Inter-Sender Role Conflict, or Role Overload.

Role Strain and Socialization

Organizational socialization appears to affect total role strain. Sixty-five percent ($n = 77$) of participants reported that their institution's ACI training prepared them for the ACI role, whereas 35% ($n = 41$) reported that their institution's ACI training did not prepare them for the ACI role. An independent t test revealed a difference in total role strain in those ACIs who reported that the ACI training provided by their institution did not adequately prepare them for the ACI role ($P < .001$; Figure 2).

Anticipatory socialization experiences did not appear to contribute to total role strain. No difference was seen in total role strain between participants with or without a formal background in principles of teaching and learning ($P = .50$). Also, no difference was shown between total role strain and participants who had a teaching certificate and those who did not ($P = .38$). In addition, the highest degree earned did not result in a difference in total role strain ($P = .75$).

Job Congruency

Job congruency did not appear to affect the total role strain score. No differences were apparent between role strain and ideal and actual job responsibilities promoted or encouraged by the ACI's immediate supervisor. Only 21% ($n = 24$) had complete congruency (ie, participants' ideal and actual job responsibilities matched those of the supervisor), whereas 25% ($n = 29$) had complete incongruency (ie, ideal job responsibilities were incongruent with actual and expected responsibilities).

DISCUSSION

Degree of Role Strain

Some degree of role strain in collegiate ATs who serve as ACIs appears to be inevitable. It is logical to assume that

Table 3. Items Contributing to a High or Moderate Degree of Role Strain

Item	Mean \pm SD
High degree of role strain (>3.40)	
Having job demands that interfere with other activities of personal importance (family, leisure)	3.90 \pm .92
Feeling physically or emotionally drained from my work at the end of the day	3.53 \pm 1.09
Coping with the number of expectations of my job	3.42 \pm .96
Moderate degree of role strain (2.70–3.39)	
Feeling pressured to cover all aspects of my job responsibilities with limited time availability	3.39 \pm 1.06
Dealing with students who are inadequately prepared or poorly motivated	3.27 \pm 1.04
The amount of work I have to do interferes with how well it gets done	3.24 \pm 1.07
Having inadequate time to meet role expectations	3.19 \pm 1.05
Having to participate in work-related activities outside regular working hours in order to meet job expectations	3.14 \pm 1.30
Feeling like I have too heavy a workload, one that cannot possibly be finished during the normal work week	3.13 \pm 1.25
Having inadequate resources (ie, secretarial support, staff, computer access, classrooms, equipment) to meet role expectations	3.07 \pm 1.22
Feeling that my role as an Approved Clinical Instructor should be compensated by the athletic training education program	3.04 \pm 1.44
Feeling that my role as an Approved Clinical Instructor should be included in athletic department performance evaluations with respect to salary considerations	3.00 \pm 1.55
Receiving insufficient recognition from athletic department for administrative tasks I perform	2.99 \pm 1.26
Receiving insufficient recognition from athletic department for expertise as clinician	2.89 \pm 1.21
Coping with the complexities of my job expectations	2.86 \pm .94
Coping with changes in clinical education requirements and the Approved Clinical Instructor's role relative to those changes	2.86 \pm 1.04
Feeling pressured to do more work than I am currently completing	2.83 \pm 1.15
Feeling that my progress on the job is not what it could or should be	2.77 \pm 1.07
Feeling torn between demands of athletic department and athletic training education program	2.77 \pm 1.17
Feeling that there is a lack of consensus between athletics and academics on the role of the certified athletic trainer as an Approved Clinical Instructor	2.71 \pm 1.25
Feeling that my role as an Approved Clinical Instructor should be included in my job description for the athletic department	2.71 \pm 1.46
Feeling unable to satisfy conflicting demands of my various work-related constituencies (ie, program director, athletic administration, students, athletes, parents)	2.70 \pm 1.06

as an AT's role set increases to include clinical instruction, health care provision, and administration, the associated role obligations also would increase. Certainly, this can lead to increased likelihood of role strain.⁴ Although this finding is comparable to academic nurse faculty who report a moderate-to-high degree of role strain in balancing teaching, research, and service,⁶ it is opposite that of clinical nursing faculty. Clinical nursing faculty reported a lower (although still substantial) degree of role strain in balancing patient care and clinical teaching.^{11,13} A practical explanation for the discrepancy in role strain between collegiate ATs who serve as ACIs and clinical nursing faculty is the differences in the study designs. Although research on clinical nursing faculty¹¹ focused on role strain related to patient care and clinical teaching, we also focused on role strain relative to administrative duties associated with patient care.

Similar to collegiate athletic training ACIs, academic and clinical nursing faculty report role overload as the highest subscale contributing to role strain.^{6,11} Nursing faculty (academic and clinical) role overload leads to an increased likelihood of burnout.¹⁸ We did not specifically examine burnout in our study, but our results regarding

role overload in ACIs should be a cause for concern. Effective coping strategies will be necessary to avoid ACI burnout.

Also of concern is our finding that GAATs serving as ACIs experienced role incompetence. Due to a small sample size, we were unable to determine if the number of semesters of experience as a GAAT affected role



Figure 2. Effect of Approved Clinical Instructor training on role strain.

Table 4. Results for 7 Subscales of Role Strain

Subscale	Mean \pm SD
Role Overload (7 items)	3.16 \pm .81
Inter-Role Conflict (3 items)	2.95 \pm .79
Role Incongruity (6 items)	2.69 \pm .77
Intra-Sender Role Conflict (8 items)	2.68 \pm .68
Role Ambiguity (8 items)	2.62 \pm .80
Inter-Sender Role Conflict (5 items)	2.57 \pm .84
Role Incompetence (5 items)	2.00 \pm .75

incompetence. However, results of other studies seem to suggest that years of experience may be related to role incompetence. One such group¹⁹ examined the relationship between years of experience as an AT and clinical instructor behaviors. Novice ACIs (<1 year of experience) initiated active learning behaviors with their athletic training students less often than did more experienced ACIs.¹⁹ Researchers²⁰ who examined sources of stress in GAATs found that even those with an average of 1.5 years of clinical experience reported time management challenges that came from balancing clinical education, patient care, and administrative responsibilities with academic responsibilities associated with being a graduate student. We surmise that role incompetence perceived by GAATs may be attributed to a lack of experience in all of these roles. Fortunately, the new Commission on Accreditation of Athletic Training Education accreditation standards require that ATs have a minimum of 1 year of clinical experience before serving as ACIs.² However, as mentioned previously, 1 year of experience still may not be ideal for quality clinical instruction due to time constraints placed on GAATs.²⁰ To this end, veteran nursing and medical educators^{21,22} recommended that clinical teaching be reserved for those clinicians who have had several years of clinical experience. In this way, the clinician could mature in the role of health care provider before also assuming the role of clinical teacher.^{21–23}

The NCAA division classification of the institution also affected the degree of role strain experienced by ACIs. The ACIs at Division II schools reported a higher degree of inter-role conflict (eg, dual appointments in athletics and academics), suggesting that the expectations associated with these 2 roles are in conflict. The ACIs at Division I institutions more typically work solely in athletics departments, where the expectation for athletic excellence is high. This situation likely creates more of a sense of urgency in patient care to return high-caliber, scholarship athletes to competition. The priorities for these ACIs clearly are focused on returning these athletes to play. Although ACIs in Division III institutions reported the highest percentage of dual appointments, they likely encountered less pressure to return athletes to competition. Thus, they may report feeling less strain in balancing patient care and academic responsibilities. The ACIs with dual appointments at Division II institutions, however, may be caught in a conflict between the high expectations of the athletics department to return scholarship athletes to competition and responsibilities in the academic unit.

Lastly, sex did not appear to be a factor in total role strain, but female ACIs reported experiencing a greater degree of role incompetence. Literature in the nursing field^{11,24} offers some insight into this finding. One researcher¹¹ studying female nurses concluded that they may experience additional role strain due to balancing career and family commitments. The nursing literature also discusses the fact that female nurses are socialized into multiple roles as wife, mother, teacher, and nurturer.²⁴ These women may experience an attack on their self-concept as they realize that they cannot meet the demands of all their roles.²⁴ Feelings of inadequacy or incompetence may follow. Some of these same dynamics are plausible in female ATs who serve as ACIs, and the issue warrants further investigation.

Organizational and Anticipatory Socialization

Organizational socialization influenced the degree of role strain for ACIs. This type of socialization often is equated with on-the-job training for skills specific to a particular working environment. Role strain can be reduced with adequate orientation to this environment.¹¹ Conduct of the ACI is also specific to each working environment or clinical setting. Although all ATEPs must include the same topics in the initial training of ACIs, the implementation of this information is specific to each ATEP.² For example, all initial ACI training must include information on student evaluation, but certainly the evaluation process is specific to each ATEP. The concept of ACI training was not originally designed with the goal of reducing role strain, but some ATEPs may need to reexamine how well their ATs are prepared for the role as an ACI. Clinical instructor educators should consider carefully how to improve on-the-job training of their ACIs. For instance, it may be helpful to conduct more frequent continuing training sessions for ACIs in order to reinforce concepts of effective clinical education and provide increased opportunities for ACIs to seek clarification and feedback on their performance.

Our results did not indicate differences in the degree of role strain between ACIs with different educational backgrounds (ie, anticipatory socialization), yet the nursing literature¹³ suggests that some level of formal preparation in clinical teaching may reduce role strain. It is not uncommon for nurses to specialize in clinical education at the graduate level.⁶ One investigator¹³ noted that approximately 90% (n = 25) of the clinical nursing faculty who completed formal preparation for clinical teaching in their master's coursework experienced less role strain. In addition, 82% (n = 23) of these clinical nursing faculty completed a practicum specifically focused on clinical supervision of students.¹³ Athletic training educators should consider incorporating principles of teaching and learning into their entry-level ATEPs or graduate-level postcertification programs to provide anticipatory socialization for future ACIs. Peer-assisted learning may be an appropriate method of introducing concepts of clinical teaching, feedback, and mentoring that are germane to becoming an effective ACI.²⁵ For example, in a laboratory setting, ATEPs could easily require upper-level students to tutor their lower-level peers regarding psychomotor skills, such as manual muscle testing or assessing vital signs.

Demographics and Role Strain

Demographic factors did not seem to affect the degree of ACI role strain. The number of hours worked per week, patient load (ie, number of student-athletes for whom the ACI was responsible each semester), and the number of students supervised per semester did not affect ACIs' degree of role strain. We were surprised, however, that most of our participants reported working 40 hours per week or less. Some research in medical education contradicts these study results. For instance, physicians who supervise medical students typically had a longer workday,²⁶ whereas other research demonstrated no effect on the length of the workday.¹⁵ Physicians working in high-volume patient care centers may have difficulty providing effective clinical teaching.²⁶

The number and academic level of students being supervised may affect role strain in ACIs. Regarding the

number of students being supervised, research in physical therapy education indicates that clinicians are actually more productive (eg, patient care load) when supervising 2 students versus 1 student.²⁷ However, research^{15,26} in medical education revealed mixed results regarding physician productivity and the number of students being supervised. Furthermore, the effect of the student's academic level on ACI role strain warrants investigation. Evidence¹¹ in the nursing literature suggests that nurses who supervise lower-level students (eg, sophomores) may encounter a higher degree of role strain. Certainly, then, the academic level of students assigned to particular ACIs should be considered in an attempt to reduce role strain, because some ACIs work better with upper-level students and others work better with lower-level students.

Job Congruency and Role Strain

Collegiate ATs serving as ACIs did not have congruency in their job responsibilities. Most ACIs were not in positions that allow them to perform their ideal job responsibilities. However, this lack of job congruency did not seem to affect total role strain in ACIs. Research²⁸ in nursing suggested some connection between job congruency and job satisfaction. A meta-analysis²⁸ of the nursing literature regarding job satisfaction revealed that role conflict and role ambiguity were moderate-to-strong predictors of job dissatisfaction in nurses. In addition, much has been written about job satisfaction in athletic training in recent years.^{29–33} Work-family conflict^{29,30} and salary³³ were correlated negatively with job satisfaction in collegiate ATs. We may be able to presume from our results that when an AT's job responsibilities lack congruency (ie, ideal/actual responsibilities differ from those emphasized by a supervisor), job dissatisfaction increases. Because the majority of ACIs in our study had some level of job incongruency, further exploration of ACI job satisfaction is worthy of investigation.

Reducing Role Strain

Our study indicates that some degree of ACI role strain is inevitable. Therefore, ATEPs should consider strategies to assist their ACIs in reducing this role strain. Goode's⁴ role theory suggests that role strain may grow exponentially as ACI roles increase without corresponding increases in rewards for those roles. Therefore, ATEP administrators should consider various extrinsic means to reward their ACIs: for example, free textbooks or apparel, campus privileges, or public recognition at ATEP events. Perhaps ATEPs can even investigate opportunities to financially compensate ACIs for their service. Certainly, many ACIs are intrinsically motivated and receive ample satisfaction in helping to shape future professionals.²² Ideally, exceptional performance as an ACI should be recognized.¹¹

Certainly one strategy to reduce role strain is to eliminate the number of role relationships, particularly those in which ACIs may have less interest or feeling of incompetence. For instance, GAATs accept positions to enhance their clinical experience, not necessarily to serve as ACIs. Further, GAATs will likely have difficulty managing the addition of the ACI role (about which they likely feel incompetent) due to their already-overwhelming role sets as clinicians and graduate students. Although many

ATEPs rely on GAATs (who have a minimum of 1 year of clinical experience) to serve as ACIs, steps should be taken to ensure that they are receiving adequate organizational socialization to this role. Research⁹ examining role strain in novice clinical nurses who accept the role of clinical instructor illustrated that role ambiguity increases during the first 2 to 3 months, followed by role overload toward the end of the first year. Even though Commission on Accreditation of Athletic Training Education standards² allow only ATs (and other qualified allied health care providers) with a minimum of 1 year's certification from the Board of Certification (or equivalent in other fields) to serve as ACIs, they may still experience role ambiguity and overload when they take on the additional role of an ACI during their second year as a GAAT. Therefore, it may benefit ATEPs to gradually introduce GAATs to the ACI role during the first year, progressively leading to service as ACIs during the second year.

Nursing clinical educators have offered several other suggestions for reducing role strain that are applicable to athletic training ACIs.²² For instance, as a reminder, program directors and clinical instructor educators could provide ACIs with a clinical education handbook that outlines the ATEP's curriculum, clinical education policies, and evaluation tools and expectations of the ACI.²² Also, ATEP administrators should be sensitive to time demands on ACIs and should be flexible in student clinical assignments. For example, an ACI may occasionally need a break from supervising students.²² Furthermore, ATEPs may consider assigning athletic training students with the same academic level (eg, junior students) to an ACI each rotation, so that the ACI can develop consistency in expectations.^{11,22} This will help to decrease ambiguity in student performance and evaluation.¹⁰ For instance, an ACI who is simultaneously supervising 3 levels of students is faced with juggling 3 sets of performance expectations and 3 different evaluation tools.

Last, role strain can be reduced by creating a positive climate within the ATEP. This could be fostered through ACI accessibility to the clinical instructor educator¹⁰ and open communication among program administrators, ACIs, and students.¹³ Nursing research¹⁰ indicated that several factors of role strain were reduced (eg, role overload, role conflict, role ambiguity) in staff nurses with the consistent presence of the coordinating clinical nurse faculty member in the clinical setting. In addition, this same research revealed that staff nurses experienced less role overload when they worked with clinical faculty who also were engaged in clinical practice than when they worked with nonclinical faculty members.¹⁰ Certainly, an ATEP clinical coordinator who is engaged in patient care in the clinical setting may have a heightened understanding of the multiple demands on the ACI¹⁰ and may be able to encourage open dialogue about student issues related to clinical education.^{10,34} When a coordinator is not able to engage in clinical practice, regular visits to clinical sites may provide these same benefits by offering a consistent presence in the clinical education setting.³⁴

CONCLUSIONS

Collegiate ATs who serve as ACIs in the collegiate setting experience role strain, which appears inevitable as

they attempt to meet the obligations associated with being health care providers, clinical educators, and administrators. Role incompetence is a contributing factor to role strain in women and GAATs, whereas inter-role conflict contributes to ACI strain at Division II institutions. In addition, at some institutions, ACI training needs to be reexamined to determine if it is adequate for preparing ATs for the role of ACI. Also, ATEP administrators should be cognizant of the effect additional role expectations will have on the AT's total degree of role strain. Specific strategies to help reduce or prevent this role strain should be incorporated into initial and continuing ACI training.

Future researchers should compare role strain in collegiate ATs serving as ACIs with those ATs not serving as ACIs. In addition, it would be beneficial to know the degree of role strain experienced by ACIs in other clinical settings, such as high schools and rehabilitation clinics. Last, the efficacy of ACI training warrants further investigation. Experimental research could be conducted to determine the efficacy of different ACI training strategies and formats on preventing or reducing role strain.

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